

List of All Chemicals

P *Pistacia lentiscus* (Anacardiaceae)

Common name(s)

Lentisco (Sp.); Chios Mastictree; Mastic; Mastixbaum (Ger.); Mastictree

How used

Medicinal

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

| Chemical | Plant Part | Low PPM | High PPM | StdDev | *Reference |
|--------------|---------------------|---------|----------|--------|------------|
| ALPHA-PINENE | Resin, Exudate, Sap | -- | -- | * | |

Activities (28)

| | |
|----------------------------------|--|
| Allelochemic | |
| Allergenic | |
| Antiacne | |
| Antibacterial | |
| Antifeedant | |
| Antiflu | Economic & Medicinal Plant Research, 5: 195. |
| Antiinflammatory | 500 mg/kg |
| Antipneumonic | |
| Antiseptic | |
| Antispasmodic | |
| Antistaphylococcic | |
| Antiviral | Economic & Medicinal Plant Research, 5: 195. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Coleoptophile | |
| Expectorant | Michael Castleman 1991. The Healing Herbs. Rodale Press, Emmaus, PA 436 pp. |
| FLavor FEMA 15-150 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Herbicide IC50=30 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insecticide 0.82 uM/fly | |
| Insectifuge 50 ppm | |
| Insectiphile | J. Stored. Prod. Res., 22:141, 1986. |
| Irritant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| P450-2B1-Inhibitor IC50=0.087 uM | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Sedative | Lawrence Review of Natural Products, Jun-90. |
| Spasmogenic | |
| Tranquilizer | Lawrence Review of Natural Products, Jun-90. |
| Transdermal | |

| | | | | |
|---------|------|----|----|---|
| AUCUBIN | Seed | -- | -- | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
|---------|------|----|----|---|

Activities (20)

| | |
|---------------------------------------|---|
| Antibacterial | |
| Antidote (Amanitin) 200 mg/kg ipr mus | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 276. |
| Antiedemic 1/2 indomethacin | Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp. |
| Antiinflammatory IC50=12-72 uM | |
| Antiinflammatory 1/2 indomethacin | |
| Antileukemic IC50=25-56 ug/ml | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46. |
| Antioxidant | |
| Antipro lactin | |
| Antistaphylococcic | |
| Candidicide | |

| | | | | |
|------------------|--|--|--|--|
| Collagenic | | | | |
| Diuretic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. | | | |
| Hepatoprotective | | | | |
| Lactagogue | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals.</i> The Pharmaceutical Press, London. 296pp. | | | |
| Laxative | Williamson, E. M. and Evans, F. J., Potter's <i>New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. | | | |
| Paralytic | Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch fur Apotheker und Arzte.</i> Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. | | | |
| Pesticide | | | | |
| RNA-Inhibitor | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 275. | | | |
| Uricosuric | Williamson, E. M. and Evans, F. J., Potter's <i>New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. | | | |

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|--------------------|-------|----|----|---|
| BETA-CARYOPHYLLENE | Plant | -- | -- | * |
|--------------------|-------|----|----|---|

| | | | | |
|-------------|-------|----|----|---|
| BETA-PINENE | Plant | -- | -- | * |
|-------------|-------|----|----|---|

Activities (13)

| | | | | |
|--------------------|---|--|--|--|
| Allergenic | | | | |
| Antiinflammatory | | | | |
| Antiseptic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. | | | |
| Antispasmodic | | | | |
| Candidicide | | | | |
| Flavor FEMA 15-600 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | |
| Herbicide | Keeler, R.F. and Tu, A.T. eds. 1991. <i>Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6)</i> Marcel Dekker, Inc. NY. 665 pp. | | | |
| Insectifuge | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. | | | |
| Irritant | Zebovitz, T. C. Ed. 1989. Part VII. <i>Flavor and Fragrance Substances</i> , in Keith L. H. and Walters, D.B., eds. <i>Compendium of Safety Data Sheets for Research and Industrial Chemicals.</i> VCH Publishers, New York. 3560-4253. | | | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | |
| Pesticide | | | | |
| Spasmogenic | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals.</i> The Pharmaceutical Press, London. 296pp. | | | |
| Transdermal | | | | |

| | | | | |
|---------|------|----|----|---|
| CHOLINE | Seed | -- | -- | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
|---------|------|----|----|---|

Activities (20)

| | | | | |
|---|---|--|--|--|
| Antialzheimeran 5-16 g/man/day | | | | |
| Antichoreic | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine.</i> Avon Books, New York. 509pp. | | | |
| Anticirrhotic 6,000 mg/man/day | | | | |
| Anticystinuric | | | | |
| Antidementia | | | | |
| Antidiabetic | | | | |
| Antidyskinetic 150-200 mg/kg/man/day | Martindale's 28th | | | |
| Antihomocysteine | | | | |
| Antimanic 15-30 g/man/day/orl | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). | | | |
| Antinociceptive | | | | |
| Antisteatotic | | | | |
| Cardiodepressant | | | | |
| Cerebrotonic | | | | |
| Cholinergic | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals.</i> The Pharmaceutical Press, London. 296pp. | | | |
| Hepatoprotective | | | | |
| Hypotensive | | | | |
| Ileorelaxant | | | | |
| Lipotropic | | | | |
| Memorigenic | | | | |
| Parasympathomimetic (1/1,000th acetylcholine) | Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs.</i> Chapman & Hall, New York. 941 pp. | | | |

| | | | | |
|--------------|------|----|----|---|
| CYCLOARTENOL | Leaf | -- | -- | List, P.H. and Horhammer, L. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
|--------------|------|----|----|---|

Activities (7)

| | | | | |
|--------------------------|--|--|--|--|
| Antibacterial | | | | |
| Antiinflammatory | | | | |
| Antirheumatic 2-5 mg/man | | | | |
| Antistaphylococcic | | | | |

| | | | | | |
|---|-------|---|----------|------|---|
| Pesticide | | | | | |
| Ubiquot | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | |
| EO | Leaf | 10000.0 | 30000.0 | 1.62 | * |
| FAT | Seed | 130000.0 | 312000.0 | 0.25 | * |
| ISOMASTIC-ACID | Plant | -- | -- | * | |
| KAEMPFEROL | Leaf | -- | -- | | List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| Activities (75) | | | | | |
| 11B-HSD-Inhibitor | | | | | |
| 5-Lipoxygenase-Inhibitor IC50 (uM)=20 | | | | | |
| Aldose-Reductase-Inhibitor 100 uM | | Oliveira, T. T., Nagem, T. J., Miranda, L. C. G., Paula, V. F., Teixeira, M. A. 1997. Inhibitory Action on Aldose Reductase by Soybean Flavonoids. <i>J Braz Chem Soc</i> , 8(3): 211-213. | | | |
| Antiaflatoxin IC50=8.73 uM | | | | | |
| Antiaflatoxin IC50=3.28 ppm | | | | | |
| Antiaggregant 30 uM | | | | | |
| Antiallergic | | | | | |
| Antibacterial 20 ug/ml | | | | | |
| Anticancer | | | | | |
| Antifertility 250 mg/kg/day/60 days/orl rat | | Kumar, P., Dixit*, V.P., and Khanna, P. Antifertility Studies of Kaempferol: Isolation and Identification from Tissue Culture of some Medicinally Important Plant Species. <i>Plantes medicinales et phytotherapie</i> , 23: 193-201, 1989. | | | |
| Antigingivitic 20 ug/ml | | | | | |
| Antitherapeutic 23-92 ug/ml | | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992. | | | |
| Antihistaminic | | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, réprint 1989. | | | |
| Antiimplantation | | | | | |
| Antiinflammatory 20 mg/kg | | | | | |
| Antiinflammatory 200 mg/kg ipr rat | | | | | |
| Antileukemic IC50=3.1 ug/ml | | Life Sciences 55: 1061. | | | |
| Antilymphocytic | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | |
| Antimutagenic ID50=10-40 nM | | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507 ACS, Washington 402 pp. | | | |
| Antioxidant IC50=40 uM | | | | | |
| Antioxidant 3/4 quercetin | | | | | |
| Antioxidant IC50=1.2 ug/ml | | | | | |
| Antiperiodontic 20 ug/ml | | | | | |
| Antiplaque 20 ug/ml | | | | | |
| Antiradicular 7 x quercetin | | | | | |
| Antiseptic 20 ug/ml | | | | | |
| Antiserotonin 200 mg/kg ipr rat | | | | | |
| Antispasmodic | | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, réprint 1989. | | | |
| Antistaphylococcic | | | | | |
| Antitumor | | | | | |
| Antitumor-Promoter | | Yasukawa, K., Takido, M., Takeuchi, M., Sato, Y., Nitta, K., and Nakagawa, S. 1989. Inhibitory Effects of Flavonol Glycosides on 12-O-Tetradecanoylphorbol-13-acetate-Induced Tumor Promotion. <i>Chem. Pharm. Bull.</i> 38(3): 774-776, 1990. | | | |
| Antiulcer 50-200 mg/kg ipr rat | | | | | |
| Antiviral 23-92 ug/ml | | | | | |
| Apoptotic 60 uM | | | | | |
| Aromatase-Inhibitor IC12=1 uM/l | | Journal of Medicinal Food 2: 235.1999. | | | |
| COX-2-Inhibitor | | | | | |
| Cancer-Preventive | | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. | | | |
| Carcinogenic | | Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. Zulu Medicinal Plants. An inventory. University of Natal Press, Pietermaritzburg. 450 pp. | | | |
| Choleretic | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. | | | |
| Copper-Chelator | | | | | |
| Cyclooxygenase-Inhibitor IC50 (uM) =20 | | | | | |
| Cytotoxic | | | | | |
| Diaphoretic? | | Lawrence Review of Natural Products, Dec-90. | | | |

Estrogenic EC50=0.1-25 uM/l Journal of Medicinal Food 2: 227.1999.

Estrogenic EC50=0.56 uM

Fungicide 20 ug/ml

Father Nature's Farmacy: The aggregate of all these three-letter citations.

HIV-RT-Inhibitor IC50=50-150 ug/ml

Garcia, J., Morin,* C., Nyasse, B., Sondengam, B-L., Tchouankeu, J-C., and Tsamo, E. Complete Structural Assignments Of An Ergosterol Derivative From Entandrophragma utile. *Journal of Natural Products*, 54(1): 136-142, 1991.

Hepatoprotective IC50=5.46 uM

Hepatoprotective IC50=1.30 ppm

Hypotensive

ICAM-1-Inhibitor

Inotropic

Iodothyronine-Deliodinase-Inhibitor

Jeffery B. Harborne and H. Baxter, eds. 1983. *Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants*. Taylor & Frost, London. 791 pp.

JNK-Inhibitor

Lipoxygenase-Inhibitor

Jeffery B. Harborne and H. Baxter, eds. 1983. *Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants*. Taylor & Frost, London.

791 pp.

MAO-Inhibitor

Mutagenic

NO-Inhibitor IC50=13.9 uM

Natriuretic

Neuroprotective

PAF-Inhibitor

Pesticide

Protisticide

Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of *Helianthemum glomeratum*. *Phytotherapy Research*, 13(2): 102-105.

Quinone-Reductase-Inducer 3 uM

TNF-alpha-Inhibitor IC50=3.99 uM

Teratologic

Topoisomerase-I-Inhibitor

Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. *Toxicol Ind Health*, 14: 223-237.

Topoisomerase-II-Inhibitor IC50=8.1 ug/ml

Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. *J Natural Products*, 58: 217-225.

Tyrosinase-Inhibitor ID50=230 uM

Uterotrophic EC50=0.1-25 uM/l Journal of Medicinal Food 2: 227.1999.

Vasodilator

cAMP-Phosphodiesterase-Inhibitor

iNOS-Inhibitor IC50=<15 uM

iNOS-Inhibitor IC50=13.9 uM

LINALOOL

Plant

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Activities (53)

Acaricide C90=<15 u/l (=<15 ppm)

Allergenic

Analgesic

Anesthetic 0.01-1 ug/ml

Antiacetylcholinesterase

Antiallergic

Huang, K. C. 1993. *The Pharmacology of Chinese Herbs*. CRC Press, Boca Raton, FL 388 pp.

Antianaphylactic

Antibacterial MIC=1,600 ug/ml

Anticariogenic MIC=1,600 ug/ml

Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against *Streptococcus mutans*. *J. Agric. Food Chem.* 41: 1102-1105.

Anticolic

Anticonvulsant 200 mg/kg ipr mus

Antiedemic

Antiglutamaergic

Antihistaminic

Huang, K. C. 1993. *The Pharmacology of Chinese Herbs*. CRC Press, Boca Raton, FL 388 pp.

Antiinflammatory

Antileukemic IC50=3.5-4.2 ug/ml

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Antilymphomeric IC50=3.5-4.2 ug/ml

Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. *Am J Chin Med*, 31(1):37-46.

Antimange

| | |
|--|--|
| Antimutagenic | |
| Antiseptic 5 x phenol | Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176) |
| Antishock | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Antispasmodic | Buchbauer, G., Jirovetz*, L., Nikiforov, A., Remberg, G., Raverdino, V. 1989. Headspace-Analysis and Aroma Compounds of Austrian Hay-Blossoms (Flores Graminis, Graminis Flos) used in Aromatherapy. <i>J. Ess. Oil Res.</i> , 2: 185-191, 1990. |
| Antiviral | |
| Barbituate-Synergist | |
| Bronchorelaxant | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| CNS-Depressant | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidstat | |
| Carminative | |
| Culicide LC50=156-194 mg/l | |
| Cytotoxic | |
| Expectorant | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| FLavor FEMA 2-40 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Acta Botanica Sinica, 32: 49. |
| GABA-nergic | |
| Hypnotic | |
| Hypothermic | |
| Insecticide LC50=156-194 mg/l | |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Irritant | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Larvicide LC50=156-194 mg/l | |
| Mosquitofuge > Deet | |
| Motor-Depressant | Buchbauer et al, e.g. Buchbauer et al, 1993. Therapeutic properties of essential oils and fragrances, Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Merck 11th Edition |
| Pesticide | |
| Prooxidant | Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp. |
| Sedative ED=1-32 mg/kg | Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176) |
| Sedative 200 mg/kg ipr mus (1% as active as diazepam) | |
| Termitifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Trichomonicide LD100=600 ug/ml | |
| Tumor-Promoter | |

LUPEOL Leaf -- -- List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (21)

| | |
|-----------------------------------|--|
| AntiEBV | |
| Antiangiogenic 30-50 ug/ml | |
| Antiedemic | |
| Antiflu | |
| Antihyperglycemic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antiinflammatory 1/3 indomethacin | |
| Antilithic 25 mg/kg/day | |
| Antimalarial IC50=46.8 ug/ml | Khalid, S.A., Farouk, A., Geary**, T.G., and Jensen, J.B. 1985. Potential Antimalarial Candidates From African Plants: An In Vitro Approach Using <i>Plasmodium falciparum</i> *. <i>Journal of Ethnopharmacology</i> , 15: 201-209, 1986. |
| Antioxalate 25 mg/kg/day | |
| Antioxidant 25 mg/kg/day | |
| Antiperioxidant 25 mg/kg/day | |
| Antiprostaglandin | |
| Antirheumatic | |
| Antitumor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antiurethrotic | |
| Antiviral | |
| Cytotoxic 50-500 ppm | |
| FPTase-Inhibitor IC50=65 ug/ml | |
| Hypotensive | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |

TOPO-2-Inhibitor
IC50=10.4 uM

| | | | | |
|----------------------------|------------------------|----|----|--|
| MASTICHIN | Resin, Exudate, Sap | -- | -- | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| MASTICIC-ACID | Resin, Exudate, Sap | -- | -- | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| MYRCENE | Plant | -- | -- | * |
| Activities (22) | | | | |
| ACE-Inhibitor | 100 ug/ml | | | |
| Aldose-Reductase-Inhibitor | 100 ug/ml | | | Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpenes from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101. |
| Allergenic | | | | |
| Analgesic | | | | Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991. |
| Antibacterial | | | | |
| Anticonvulsant | | | | |
| Antimutagenic | | | | Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991. |
| Antinitrosaminic | | | | |
| Antinociceptive | 10-20 mg/kg ipr mus | | | Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990. |
| Antinociceptive | 20-40 mg/kg scu mus | | | Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990. |
| Antioxidant | | | | Jim Duke's personal files. |
| Antispasmodic | | | | Jim Duke's personal files. |
| Chemopreventive | | | | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| FLavor FEMA 0.5-9 | | | | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | | | | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Hypothermic | | | | |
| Insectifuge | | | | |
| Irritant | | | | Zeebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Myorelaxant | 100-200 mg/kg | | | |
| P450-2B1-Inhibitor | IC50=0.14 uM | | | |
| Perfumery | | | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Pesticide | | | | |
| MYRICETIN | Leaf | -- | -- | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| Activities (34) | | | | |
| Allelochemical | IC82=1 mM | | | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| AntiHIV | | | | |
| Antiallergenic | | | | |
| Antibacterial | MIC=20-500 ug/ml | | | |
| Antifeedant | IC52=<1,000 ppm diet | | | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antigastric | | | | |
| Antigingivitic | MIC=20 ug/ml | | | |
| Antigonadotrophic | | | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antihistaminic | | | | |
| Antiinflammatory | | | | Oriental Materia Medica (three volumes by Dr. Hsu and collaborators) |
| Antimutagenic | ID50=2-5 nM | | | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507 ACS, Washington 402 pp. |
| Antioxidant | IC99=200 ppm | | | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507 ACS, Washington 402 pp. |
| Antioxidant | 1.4 uM | | | |
| Antioxidant | IC50=3.9 ug/ml | | | |
| Antiperiodontic | MIC=20 ug/ml | | | |
| Antiplaque | MIC=20 ug/ml | | | |
| Antiseptic | MIC=20 ug/ml | | | |
| Antiviral | | | | |
| Apoptotic | 60 uM | | | |
| COMP-Inhibitor | | | | Dullo, A. G., et al. 1999. Efficacy of a green tea extract rich in catechin polyphenols and caffeine in increasing 24-h energy expenditure and fat oxidation in humans. Am. J. Clinical Nutrition, 70: 1040-1045. |

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|--|--|
| Candidicide MIC=150 ug/ml | Planta Medica, 57: A43, 1991. |
| Diuretic | Oriental Materia Medica (three volumes by Dr. Hsu and collaborators) |
| Hypoglycemic | Economic & Medicinal Plant Research, 6: 170. |
| Larvistat IC50=2.6-3.5 mM/kg diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Mutagenic | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Oxidase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Pesticide | |
| Quinone-Reductase-Inducer 36 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216. |
| Topoisomerase-I-Inhibitor IC50=11.9 ug/ml | |
| Topoisomerase-II-Inhibitor IC50=11.9 ug/ml | |
| Tyrosine-Kinase-Inhibitor | Economic & Medicinal Plant Research, 6: 170. |
| Vasodilator | |

OLEANOLIC-ACID Plant

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Activities (64)

| | |
|--------------------------------------|--|
| Abortifacient | |
| AntiHIV IC50=21.8 ug/ml | |
| AntiHIV EC50=1.7 ug/ml | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095. |
| AntiPGE2 IC50=24 uM | |
| AntiTGF-beta IC50=19-24 uM | |
| Antiallergic | |
| Antiarrhythmic 40 mg/kg | |
| Antiatherosclerotic | |
| Antibacterial MIC=625-1,250 ug/ml | |
| Anticarcinomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Anticariogenic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Anticomplement IC40-50 0.01 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Anticomplement IC80-90 0.05 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Antiedemic IC36=40 mg/kg ipr rat | |
| Antifertility | |
| Antigingivitic MIC=625-1,250 ug/ml | |
| Antihepatotoxic | |
| Antihyperlipidemic | |
| Antiinflammatory 40 mg/kg ipr | Aquino, R., De Feo, V., De Simone, F., Pizza, C.*, and Cirino, G. Plant Metabolites. New Compounds And Anti-Inflammatory Activity Of Uncaria tomentosa. <i>Journal of Natural Products</i> , 54(2): 453-459, 1991. |
| Antiischemic 40 mg/kg | |
| Antileukemic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antileukotriene IC50=17 uM | |
| Antimalarial IC50=70-89 ug/ml | |
| Antinephritic IC50=19-24 uM | |
| Antioxidant | Balanehru, S. and Nagarajan, B. 1992. Intervention of Adriamycin Induced Free Radical Damage. <i>Biochemistry International</i> 28(4): 735-744, 1992. |
| Antioxidant IC46=10 uM | |
| Antiperiodontic MIC=625-1,250 ug/ml | |
| Antiperoxidant IC30=200 ug/ml | |
| Antiplaque MIC=625-1,250 ug/ml | |
| Antiplasmodial IC50=70-89 ug/ml | |
| Antisarcomic | |
| Antiseptic MIC=625-1,250 ug/ml | |
| Antitumor | |
| Antitumor (Breast) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Colon) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |

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| Antitumor (Lung) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Pancreas) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antiulcer >carbenoxolone | |
| Antiviral EC50=1.7 ug/ml | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095. |
| Antiviral IC50=21.8 ug/ml | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095. |
| Aromatase-Inhibitor | |
| Beta-Blocker | |
| Beta-Glucuronidase-Inhibitor ~100 mg/kg | |
| COX-2-Inhibitor IC50=295 uM | |
| COX-2-Inhibitor | Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Cardioprotective 40 mg/kg | |
| Cardiotonic | |
| Cyclooxygenase-Inhibitor | |
| Diuretic | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Elastase-Inhibitor IC50=~15 uM | |
| Hepatoprotective | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211. |
| Hypolipemic | |
| Hypotensive | |
| Immunomodulator | |
| Leucocytogenic | |
| NF-kB-Inhibitor | |
| Phagocytotic | |
| Piscicide | ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| Prostaglandin-Synthesis-Inhibitor igs mus | |
| Sedative | |
| Uterotonic | |
| Vasopressor | |

| | | | | |
|-------------|-------|---------|---------|---|
| PLANTEASE | Seed | -- | 220.0 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| PROCYANADIN | Shoot | -- | -- | * |
| PROTEIN | Seed | 72000.0 | 87000.0 | -1.31 |
| QUERCETIN | Leaf | -- | -- | List, P.H. and Horhammer, L. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

Activities (176)

| | |
|--|--|
| 11B-HSD-Inhibitor | |
| 5-Lipoxygenase-Inhibitor IC50 (uM)=4 | |
| ATPase-Inhibitor | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. |
| Aldehyde-Oxidase-Inhibitor IC70-96=10 uM | |
| Aldose-Reductase-Inhibitor 100 uM | |
| Aldose-Reductase-Inhibitor 4 ug/ml | Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. <i>Sankyo Kenkyusho Nempo</i> , 43: 99-110. |
| Aldose-Reductase-Inhibitor IC50=0.84 ug/ml cow | Okada,Y,et al.1995.Search for Naturally Occurring Substances to Prevent the Complications of Diabetes.II.Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation. <i>Chem Pharm Bull</i> 43(8):1385-1387 |
| Aldose-Reductase-Inhibitor IC50=0.344 uM | Mao, X. M., Zhang, J. Q. 1993. Inhibition of Aldose Reductase by Extracts of Chinese Herbal Medicine. <i>Zhongguo Zhongyao Zazhi</i> , 18(10): 623-624. |
| Allelochemical IC82=1 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Allergenic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Analgesic | |
| AntiCrohn's 400 mg/man/3x/day | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| AntiGTF ID50=120 ug/ml | |
| AntiHIV | |
| AntiPMS 500 mg/2x/day/wmn | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiaflatoxin IC50=25 uM | |
| Antiaflatoxin IC50=7.5 ppm | |

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|-------------------------------------|--|
| Antiaggregant | 30 uM |
| Antiaging | |
| Antiallergic IC50=14 uM | Jim Duke's personal files. |
| Antialzheimeran | |
| Antianaphylactic | Meli, R., Autore, G., Di Carlo, G., Capasso, F. Inhibitory Action of Quercetin on Intestinal Transit in Mice. <i>Phytotherapy Research</i> 4(5): 201, 1990. |
| Antiangiogenic | |
| Antiarthritic | |
| Antiasthmatic IC50=14 uM | |
| Antiatherosclerotic | |
| Antibacterial | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Anticarcinomic (Breast) IC50=1.5 uM | Medline (post 1990 searches filed in my computer) |
| Anticariogenic ID50=120 ug/ml | |
| Anticataract | |
| Anticolitic 400 mg/man/3x/day | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Anticomplementary | |
| Anticystitic 1,000 mg/day/4 weeks | |
| Antidepressant | |
| Antidermatitic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antidiabetic | |
| Antielastase IC50=0.8 ug/ml | |
| Antiecephalitic | Economic & Medicinal Plant Research, 5: 199. |
| Antiescherichic | |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antifibrosarcomic | |
| Antiflu | Vlietinck, A.J. and Dommisse, R.A. eds. 1985. <i>Advances in Medicinal Plant Research.</i> Wiss. Verlag. Stuttgart. |
| Antigastric | Rastitel'nye Resursy, 21: 85. |
| Antigonadotropic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp. |
| Antihepatotoxic | Joyeux, M., Rolland, A., Fleurentin, J., Mortier, F., and Dorfman, P. 1989. Tert-Butyl Hydroperoxide-Induced Injury in Isolated Rat Hepatocytes: A Model for Studying Anti-Hepatotoxic Crude Drugs. <i>Planta Medica</i> 56(2): 171-173, 1990. |
| Antiherpetic 48-150 ug/ml | |
| Antihistaminic IC50=<10 uM | |
| Antihydrophobic | Vlietinck, A.J. and Dommisse, R.A. eds. 1985. <i>Advances in Medicinal Plant Research.</i> Wiss. Verlag. Stuttgart. |
| Antihypertensive | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs.</i> CRC Press, Boca Raton, FL 388 pp. |
| Antiinflammatory 20-150 mg/kg | Fitoterapia No.5-1990. |
| Antileishmanic IC50=64 | |
| Antileukemic IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antileukemic IC50=>10 ug/ml | Life Sciences 55: 1061. |
| Antileukemic 5.5-60 uM | |
| Antileukotriene | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antilipoperoxidant IC67=50 | |
| Antimalarial IC50=1-6.4 ug/ml | Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987. |
| Antimelanomic | |
| Antimetastatic | |
| Antimutagenic ID50=2-5 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID50=0.62 ug/ml | |
| Antimycarditic | Economic & Medicinal Plant Research, 5: 199. |
| Antinitrosaminic | |
| Antinociceptive | |
| Antioxidant IC96=300 ppm | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant ED50=2.3 uM | Seidel, V., Verholle, M., Malard, Y., Tillequin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. <i>Phytotherapy Research</i> , 14(2): 93-98. |
| Antioxidant 4.7 x Vit. E | |
| Antioxidant IC47=10 uM | |
| Antipancreatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code.</i> Hyperion, NY. |
| Antiperiodontal | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiperistaltic | |
| Antipermeability | |

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| Antipharyngitic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplaque | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplasmodial IC50=13-64 | |
| Antipodriac | |
| Antipolio | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiproliferant 10 nM | |
| Antiprostanoid | |
| Antiprostatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Antipsoriac | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiradicular IC50=4.6 uM | Planta Medica, 56(6): 695, 1990. |
| Antispasmodic | |
| Antistreptococcic ID50=120 ug/ml | |
| Antithiamin | Phenolic Compounds in Food and Their Effects on Health, 69. |
| Antithrombic | |
| Antitrypanosomic IC50=13 | |
| Antitumor 10 uM | |
| Antitumor (Bladder) | |
| Antitumor (Breast) | |
| Antitumor (Colon) | |
| Antitumor (Lung) | |
| Antitumor (Ovary) | |
| Antitumor (Skin) 20 uM | |
| Antitumor-Promoter | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiulcer | |
| Antiviral IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antiviral 48-150 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. J. of Natural Products 55(12):1732-1740, 1992. |
| Apoptotic 20-60 uM | |
| Bacteristat 10 mg/ml | |
| Bradycardiac | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| COMT-Inhibitor | |
| COX-2-Inhibitor <40 uM | |
| Calmodulin-Antagonist | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Capillariprotective | Merck 11th Edition |
| Carcinogenic 40,000 ppm (diet) mus | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Catabolic | |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A2-Inhibitor | |
| Cytotoxic ED50=70 ug/ml | Matsukawa, Y., et al. The Effect of Quercetin and Other Flavonoids on Cell Cycle Progression and Growth of Human Gastric Cancer Cells. Planta Medica, 56(6): 677, 1990. |
| Cytotoxic IC82=100 ug/ml | Planta Medica, 57: A113, 1991. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Differentiator 5.5 uM | |
| Estrogenic 10% genistein | |
| Fungicide | |
| Glucosyl-Transferase-Inhibitor ID50=120 ug/ml | |
| HIV-RT-Inhibitor IC50=<1 ug/ml | Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. Journal of Natural Products, 53(5): 1234-1240, 1990. |
| Hemostat | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Hepatomagenic 5,000 ppm (diet) rat | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective | |
| Hypoglycemic 100 mg/kg orl rat | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989. |
| Inotropic | |
| Insulinogenic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Juvabional | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Larvistat 8,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC11=1.25 mM | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. J. Agric. Food Chem. 38: 688-690. |

IC50=>5 uM

MAO-A-Inhibitor

MMP-9-Inhibitor 20 uM

Mast-Cell-Stabilizer

Metal-Chelator (Copper) Seidel, V., Verholle, M., Malard, Y., Tillequin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from *Ballota nigra* L. Inhibit in vitro LDL Peroxidation. *Phytotherapy Research*, 14(2): 93-98.

Metalloproteinase-Inhibitor IC50=>42 uM

Mutagenic

NADH-Oxidase-Inhibitor

NEP-Inhibitor IC50=>42 uM

NF-kB-Inhibitor

NO-Inhibitor IC>50=125 uM

NO-Synthase-Inhibitor 5-

50 uM

Neuroprotective 5-25 uM

Ornithine-Decarboxylase-Inhibitor <10 uM

P450-Inducer 5 uM Father Nature's Farmacy: The aggregate of all these three-letter citations.

P450-Inhibitor 50-100 uM Father Nature's Farmacy: The aggregate of all these three-letter citations.

PGE2-Inhibitor

PTK-Inhibitor 0.4-24 uM

Pesticide

Phospholipase-Inhibitor

Plasmodicide Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.

Proliferant

Prostaglandin-Synthesis-Inhibitor 40 ug/ml Ibewuike, J. C., Ogunbamila, F. O., Ogundaini, A. O., Okeke, I. N., Bohlin, L. 1997. Antiinflammatory and Antibacterial Activities of C-methylflavonol from *Piliostigma thonningii*. *Phytotherapy Research*, 11(4): 281-284.

Protein-Kinase-C-Inhibitor Naim, M., Zehavi, U., Nagy, S., and Rouseff, R.L. Hydroxycinnamic Acids as Off-Flavor Precursors in Citrus Fruits and Their Products. Phenolic Compounds in Food and Their Effects on Health, Ch.14.

Quinone-Reductase-Inducer 6 uM Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. *Cancer Lett.*, 120 (2): 213-216.

Quinone-Reductase-Inducer 13 uM

TNF-alpha-Inhibitor IC50=3.11 uM

Teratologic

Topoisomerase-I-Inhibitor IC50=12.8 ug/ml

Topoisomerase-I-Inhibitor IC50=42 uM

Topoisomerase-II-Inhibitor IC50=1-6.9 ug/ml

Topoisomerase-II-Inhibitor IC50=23-40 uM

Tumorigenic 0.1% diet orl rat/yr Jim Duke's personal files.

Tyrosinase-Inhibitor ID50=70 uM

Tyrosine-Kinase-Inhibitor Economic & Medicinal Plant Research, 6: 170.

VEGF-Inhibitor

Vasodilator

Xanthine-Oxidase-Inhibitor IC50=>0.4 ug/ml Chem. & Pharm. Bull. 38: 1772.

Xanthine-Oxidase-Inhibitor IC50=10.6 ug/ml

Xanthine-Oxidase-Inhibitor 3.1 uM

cAMP-Phosphodiesterase-Inhibitor Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

iNOS-Inhibitor IC50=20 uM

QUINIC-ACID Leaf -- 48000.0 0.66 *

Activities (1)

Choleretic Fitoterapia No.5-1986.

RHINANTHIN Seed -- -- CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

SHIKIMIC-ACID Leaf -- 18000.0 -1.0 *

Activities (14)

Analgesic

| | |
|-----------------------------|---|
| Anticonvulsant | Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp. |
| Antioxidant 7 x quercetin | |
| Antiradicular 7 x quercetin | |
| Antispasmodic | Grenand, P., Moretti, C., and Jacquemin, H. 1987. Pharmacopees Traditionnelles en Guyane. l'ORSTROM, Paris. 569 pp. |
| Antitumor | |
| Antitumor-Promoter | |
| Bruchifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Cancer-Preventive | |
| Carcinogenic | Merck 11th Edition |
| Ileorelaxant | |
| Mutagenic | |
| Pesticide | |

STARCH Seed -- -- CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities (5)

| | |
|----------------------|--|
| Absorbent | Martindale's 29th |
| Antidote (Iodine) | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antinesidioblastosic | Martindale's 29th |
| Emollient | Martindale's 29th |
| Poultice | Martindale's 29th |

TANNIN Leaf -- 113000.0 0.03 List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (35)

| | |
|---|--|
| Anthelmintic | |
| AntiHIV | |
| Antibacterial | |
| Anticancer | |
| Anticariogenic | |
| Antidiarrheic | |
| Antidysenteric | |
| Antihepatotoxic | |
| Antihypertensive | |
| Antilipolytic | |
| Antimutagenic | |
| Antinephritic | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antiophidic | Economic & Medicinal Plant Research, 5: 363. |
| Antioxidant IC50=1.44 ug/ml | |
| Antioxidant 1/3 quercetin | |
| Antiradicular 500 mg/kg/day orl mus | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antiradicular 1/3 quercetin | |
| Antirenitic | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antitumor | |
| Antitumor-Promoter | |
| Antulcer | |
| Antiviral | |
| Cancer-Preventive | HerbalGram No. 22 - Spring 1990, page 14. |
| Carcinogenic | |
| Chelator | |
| Cyclooxygenase- Inhibitor | |
| Glucosyl- Transferase-Inhibitor | |
| Hepatoprotective | |
| Immunosuppressant | |
| Lipoxygenase- Inhibitor | |
| MAO-Inhibitor | |
| Ornithine- Decarboxylase- Inhibitor | |
| Pesticide | |
| Psychotropic | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |

| | | | | | |
|------------|-------|--------|--------|------|---|
| TERPENES | Leaf | 4000.0 | 8000.0 | -1.0 | List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| TIRUCALLOL | Plant | -- | -- | * | |